

# Material Safety Data Sheet

According to regulation (EC) No. 1907/2006 (REACH)



## 70901 Butyl Glycol

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Revised edition: 11.04.2014

Version: 9.1

Printed: 25.02.2016

### 1. Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1. Product Identifier

Product Name: Butyl Glycol

Article No.: 70901

#### 1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:

Industrial application.

Uses advised against:

#### 1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG

Address: Hauptstr. 41-47, 88317 Aichstetten, Germany

Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606

Internet: www.kremer-pigmente.de

E-Mail: info@kremer-pigmente.de

Importer: --

#### 1.4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

### 2. Hazards Identification

#### 2.1. Classification of the Substance or Mixture

Classification according to EC  
Regulation 1272/2008

Acute toxicity (oral), hazard category 4  
Acute toxicity (dermal), hazard category 4  
Serious eye damage, hazard category 2  
Skin irritation, category 2  
Acute toxicity (inhalation), hazard category 4

H302 Harmful if swallowed.

Cat.: 4

H312 Harmful in contact with skin.

Cat.: 4

H315 Causes skin irritation.

Cat.: 2

H319 Causes serious eye irritation.

Cat.: 2

H332 Harmful if inhaled.

Cat.: 4

Classification according to EC  
Regulation No. 67/548 or No. 1999/45

Harmful (Xn) R20 Harmful by inhalation.

R21 Harmful in contact with skin.

Harmful (Xn) R22 Harmful if swallowed.

Irritating (Xi) R36 Irritating to eyes.

Irritating (Xi) R38 Irritating to skin.

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*Safety Phrases:*

*Possible Environmental Effects:*

See Section 12.

### 2.2. Label Elements

*Classification according to EC Regulation 1272/2008*

*Hazard designation:*



GHS07-1

*Signal word:*

Warning

*Hazard designation:*

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

*Safety designation:*

P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ clothing/ eye/ face protection.
P302+P352	If on skin: Wash with soap and water.

*Hazardous components for labelling:*

2-Butoxyethanol

### 2.3. Other Hazards

## 3. Composition/Information on Ingredients

### 3.1. Substance

### 3.2. Mixture

*Chemical Characterization:*

*Hazardous Ingredients:*

2-Butoxyethanol (Xn; R20/21/22-36/38; H302-312-315-319-332); REACH Reg. No. 01-2119475108-36-xxxx	100 %	CAS-Nr: 111-76-2 EINECS-Nr: 203-905-0 EC-Nr: 603-014-00-0
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*Additional information:*

## 4. First Aid Measures

### 4.1. Description of the First Aid Measures

*General information:*

Remove contaminated clothes immediately.

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*After inhalation:*

*Supply fresh air. If required give artificial respiration. In case of complaints or unconsciousness consult a physician. In case of unconsciousness place patient stable in side position for transportation.*

*After skin contact:*

*Wash off with plenty of water and soap. Consult a physician if irritation persists.*

*Remove contaminated clothing.*

*After eye contact:*

*Rinse open eyes with plenty of water. In case of discomfort seek medical help.*

*If possible bring to an eye clinic.*

*After ingestion:*

*Do not induce vomiting. Consult physician immediately.*

*Rinse mouth with water and drink plenty of water.*

*Never give anything by mouth to an unconscious person.*

*In case of spontaneous vomiting, bring unconsciousness person in a stable side position.*

### 4.2. Most important Symptoms and Effects, both Acute and Delayed

*Symptoms:*

*Irritation of eyes and skin.*

*Effects:*

*No further information available.*

### 4.3. Indication of any Immediate Medical Attention and special Treatment needed

*Treatment:*

*Treat symptomatically.*

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## 5. Fire-Fighting Measures

### 5.1. Extinguishing Media

*Suitable extinguishing media:*

*Water mist, extinguishing powder, foam, carbon dioxide.*

*Unsuitable extinguishing media:*

*Never apply a strong water jet.*

### 5.2. Special Hazards arising from the Substance or Mixture

*Special hazards:*

*Fumes can form an explosive mixture with air.*

*In case of fire: formation of carbon monoxide and dioxide.*

### 5.3. Advice for Firefighters

*Protective equipment:*

*Wear self-contained respiratory protective device.*

*Wear suitable protective clothing.*

*Further information:*

*Cool exposed containers with water mist.*

*Collect contaminated extinguishing water and debris separately;*

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*avoid contamination of sewage system.*

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### 6. Accidental Release Measures

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

*Personal precautions:*

*Wear appropriate protective equipment. Keep spectators away.  
Do not inhale vapors or mist.  
Avoid contact with eyes and skin.*

#### 6.2. Environmental Precautions

*Environmental precautions:*

*Prevent contamination of soils, drains and surface water.  
Contact local authorities if product pollutes soil or vegetation.*

#### 6.3. Methods and Material for Containment and Cleaning Up

*Methods and material:*

*Contain with absorbent material (sand, diatomaceous earth, universal absorbent, Oil Dri) and dispose accordingly.*

#### 6.4. Reference to other Sections

*Protective clothing, see Section 8.*

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### 7. Handling and Storage

#### 7.1. Precautions for Safe Handling

*Instructions on safe handling:*

*Provide good ventilation and/or exhaust at the workplace. Ensure adequate ventilation. Handle and open container with care.  
Keep containers tightly closed.  
Avoid contact with eyes and skin.  
The usual precautionary measures are to be adhered to when handling chemicals.  
A nearby eyewash facility should be available for emergencies.*

*Hygienic measures:*

*Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.*

#### 7.2. Conditions for Safe Storage, including any Incompatibilities

*Storage conditions:*

*Store the product in the original tightly sealed containers in a dry and cool place.  
Floor must be solvent resistant and leakproof.  
Keep away from ignitable sources, heat and fire.  
Product is hygroscopic.*

*Requirements for storage areas and containers:*

*Storage: In the original container.*

*Information on fire and explosion protection:*

*Combustible liquid.  
Vapors may form an explosive mixture with air. Vapor is heavier*

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*than air and spreads along the ground.*

*Take measures to prevent electrostatic discharge.*

*Do not store together with: foodstuffs and animal feed.*

*Do not store together with combustible and self-ignitable products.*

*Storage class (VCI):*

10; Combustible liquids

*Further Information:*

### 7.3. Specific End Use(s)

*Further information:*

No information available.

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## 8. Exposure Controls/Personal Protection

### 8.1. Parameters to be Controlled

*Parameters to be controlled (DE):*

TRGS 900

2-Butoxyethanol (CAS 111-76-2), TLV: 98 mg/m<sup>3</sup>; 20 ppm (4)

Can be absorbed by the skin.

Y: No teratogenic risk when the exposure limit values (ELV) and biological limit values (BLV) are adhered to.

STEL: 246 mg/m<sup>3</sup>, 50 ppm EU ELV

TWA: 98 mg/m<sup>3</sup>, 20 ppm EU ELV

*Parameters to be controlled:*

*Derived No-Effect Level (DNEL):*

89 mg/kg (worker, skin contact (24h), acute effect)

663 mg/kg (worker, inhalation, acute effect)

246 mg/kg (worker, inhalation, acute effect - local effect)

75 mg/kg (worker, skin contact (24h), chronic effect)

98 mg/kg (worker, inhalation, chronic effect)

44.5 mg/kg (consumer, skin contact (24h), acute effect)

426 mg/kg (consumer, inhalation, acute effect)

13.4 mg/kg (consumer, swallowing (24h), acute effect)

123 mg/kg (consumer, inhalation, acute effect)

38 mg/kg (consumer, skin contact (24h), chronic effect)

49 mg/kg (consumer, inhalation, chronic effect)

3.2 mg/kg (consumer, swallowing (24h), chronic effect)

*Predicted No-Effect Concentration (PNEC):*

Fresh water: 8.8 mg/l

Fresh water sediment: 34.6 mg/kg (DW)

Seawater: 0.88 mg/l

Sea water sediment: 3.46 mg/kg (DW)

Soil: 2.8 mg/kg

Sewage treatment system (STP): 463 mg/l

*Additional Information:*

### 8.2. Exposure Controls

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### *Technical protective measures:*

*Adequate ventilation to control airborne concentrations below the exposure limits.*

### *Personal Protection*

#### *General protective measures:*

*Keep away from foodstuffs and drinks. Do not eat, drink or smoke during work. Wash hands before breaks and at the end of work.*

*Avoid contact with eyes and skin.*

*Do not inhale gas/fumes/vapor/aerosol.*

*Remove contaminated clothing immediately.*

#### *Respiratory protection:*

*Respiratory equipment required in case of insufficient ventilation, filter type A.*

#### *Hand protection:*

*Protective gloves*

*Protective gloves should be changed regularly, especially after intensive contact with the product.*

*Each work area must have adequate protective gloves.*

#### *Protective glove material:*

*Butyl rubber (480 min; 0.5 mm).*

*Fluoro carbon rubber - FKM (480 min; > 0.4 mm).*

#### *Eye protection:*

*Tightly fitting safety goggles (EN 166).*

#### *Body protection:*

*Protective clothing, solvent resistant*

#### *Environmental precautions:*

*Prevent contamination of open water ways and sewage system.  
Avoid contamination of ground water.*

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## 9. Physical and Chemical Properties

### 9.1. Information on Basic Physical and Chemical Properties

*Form:* liquid

*Color:* colorless

*Odor:* mild

*Odor threshold:*  
No information available.

*pH-Value:*  
not applicable

*Melting temperature:* -75°C (1013 hPa)

*Boiling temperature:* 168 - 172°C (1013 hPa)

*Flash point:* 67°C (ASTM D 93)

*Evaporation rate:* 0.06 (Butylacetat=1)

*Flammability (solid, gas):*

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*not available*

*Upper explosion limit:*

10.6 Vol.%

*Lower explosion limit:*

1.1 Vol.%

*Vapor pressure:*

0.89 hPa (20°C)

*Vapor density:*

*No information available.*

*Density:*

0.9 g/cm<sup>3</sup> (20°C)

*Solubility in water:*

*completely miscible*

*Coefficient of variation (n-Octanol/Water):*

0.81 logKow (OECD 107)

*Auto-ignition temperature:*

230°C

*Decomposition temperature:*

*No data available.*

*Viscosity, dynamic:*

3.9 mPa.s (20°C)

*Explosive properties:*

*Product is not explosive; however, an explosive vapor/air mixture can be formed.*

*Oxidizing properties:*

*not oxidizing*

*Bulk density:*

*not determined*

### 9.2. Further Information

*Solubility in solvents:*

*Viscosity, kinematic*

3.642 mm<sup>2</sup>/s (20°C)

*Burning class:*

*Solvent content:*

*Solid content:*

*Particle size:*

*Other information:*

*No further information.*

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## 10. Stability and Reactivity

### 10.1. Reactivity

*Stable if used according to specifications.*

### 10.2. Chemical Stability

*No decomposition if used according to specifications.*

### 10.3. Possibility of Hazardous Reactions

*Formation of explosive peroxides possible.*

*Reactions with base metals: development of hydrogen.*

*Incompatible with strong oxidizing agents.*

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### 10.4. Conditions to Avoid

*Conditions to avoid:*

*Avoid contact with heat, sparks and open fire.  
Protect from light.*

*Thermal decomposition:*

*No decomposition if used according to specifications.*

### 10.5. Incompatible Materials

*Strong oxidizing agents, alkalis, light metal alloys, aluminium*

### 10.6. Hazardous Decomposition Products

*Carbon oxides*

### 10.7. Further Information

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## 11. Toxicological Information

### 11.1. Information on Toxicological Effects

*Acute Toxicity*

*LD50, oral:*

*1746 mg/kg (rat)  
1414 mg/kg (guinea pig)*

*LD50, dermal:*

*2000 mg/kg (guinea pig; OECD 402)*

*LC50, inhalation:*

*LC0: > 3.1 mg/m<sup>3</sup> (1h, vapor)*

*Primary effects*

*Irritant effect on skin:*

*Irritating (rabbit; OECD 405)*

*Irritant effect on eyes:*

*Irritating effect (rabbit).*

*Inhalation:*

*No information available.*

*Ingestion:*

*No information available*

*Sensitization:*

*No sensitizing effect (guinea pig).*

*Mutagenicity:*

*In vitro genetic-toxicity: no mutagenic effects*

*Reproductive toxicity:*

*Some effects on the reproduction were only observed in animal tests at high dosages, in which toxic effects were induced onto the parents.*

*Carcinogenicity:*

*No carcinogenic effect (in animal studies).*

*Teratogenicity:*

*Did not show any teratogenic effects in animal studies.*

*Specific target organ toxicity (STOT):*

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*Single exposure: the substance or mixture is not classified as specific target organ toxicant.*

*Repeated exposure: the substance or mixture is not classified as specific target organ toxicant.*

*Additional toxicological information:*

*Aspiration hazard: not applicable*

## 12. Ecological Information

### 12.1. Aquatic Toxicity

*Fish toxicity:*

*LC50: 1474 mg/l (96h, Oncorhynchus mykiss; OECD 203)  
NOEL: > 100 mg/l (Brachydanio rerio, 21d)*

*Daphnia toxicity:*

*EC50: 1550 mg/l (48h, Daphnia magna; OECD 202)  
NOEL: 100 mg/l (21d, Daphnia magna; OECD 211)*

*Bacteria toxicity:*

*EC0: 700 mg/l (16h; Pseudomonas putida)*

*Algae toxicity:*

*EC50: 1840 mg/l (72h, Pseudokirchneriella subcapitata; OECD 201)*

### 12.2. Persistency and Degradability

*90 %; readily biodegradable (28d, active sludge; OECD 301B)*

### 12.3. Bioaccumulation

*log Kow: 0,81 (25°C)*

*Bioaccumulation is not to be expected.*

### 12.4. Mobility

*Does not evaporate from the surface of the water to the atmosphere.*

*Not expected to adsorb on soil.*

### 12.5. Results of PBT- und vPvP Assessment

*This substance is not classified as PBT (persistent, bioaccumulative, toxic), nor as vPvB (very persistent, very bioaccumulative).*

### 12.6. Other Adverse Effects

*Water hazard class:*

*Do not let product contaminate ground water, waterways or sewage system.*

*Behaviour in sewage systems:*

*Further ecological effects:*

*AOX Value:*

## 13. Disposal Considerations

### 13.1. Waste Treatment Methods

*Product:*

*Dispose of according to official national and local regulations.*

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*European Waste Code (EWC):*

*The waste code is determined according to the kind of waste and industry stated in the European Waste Catalogue.*

*Uncleaned packaging:*

*Dispose of according to official local regulations.*

*Waste Code No.:*

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### 14. Transport Information

#### 14.1. UN Number

*ADR, IMDG, IATA*

#### 14.2. UN Proper Shipping Name

*ADR/RID:*

*No hazardous goods according to ADR (land transportation).*

*IMDG/IATA:*

*No hazardous goods according to IMDG.*

#### 14.3. Transport Hazard Classes

*ADR Class:*

*not applicable*

*Hazard no.:*

*Classification code:*

*Tunnel no.:*

*IMDG Class (sea):*

*Hazard no.:*

*EmS No.:*

*IATA Class:*

*not applicable*

*Hazard no.:*

#### 14.4. Packaging Group

*ADR/RID:*

*not applicable*

*IMDG:*

*IATA:*

#### 14.5. Environmental Hazards

*None*

#### 14.6. Special Precautions for User

*not applicable*

#### 14.7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

*IMDG: not applicable*

#### 14.8. Further Information

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### 15. Regulatory Information

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### 15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

*Water hazard class:*

*1, slightly hazardous for water*

*Local regulations on chemical accidents:*

*Does not underlie the Accident Ordinance.*

*Employment restrictions:*

*The employment restrictions for young workers in accordance with the Youth Employment Protection Law (94/33/EC) are to be observed.*

*The employment restrictions for expectant and nursing mothers in accordance with the Maternity Protection Guideline (94/85/EEC) are to be observed.*

*Restriction and prohibition of application:*

*Technical instructions on air quality:*

### 15. 2. Chemical Safety Assessment

*A Chemical Safety Assessment has been carried out for this product.*

### 15. 3. Further Information

*Listed in:*

*2-Butoxyethanol:*

*EINECS (203-905-0), TSCA (US), AICS (AUS), DSL/ INV (CA), ENCS/JEX/ISHL (JP)(2)-2424, (2)-407, (7)-97, KECI (KR) KE-04134, PICCS (PH), IECSC (CN), CLSC (NZ)*

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### 16. Other Information

*This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.*